

Tribal Utility Formation in the **Bonneville Power Administration** **Service Territory**

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The Basics

- BPA markets power from 31 Federal dams, the Columbia Generating Station Nuclear Plant, and several small non-Federal power plants
- About 80% of the power BPA sells is hydroelectric
- BPA accounts for about 30% of the electric power consumed within the region
- BPA owns and operates 75% of the Pacific Northwest's high voltage electrical transmission system



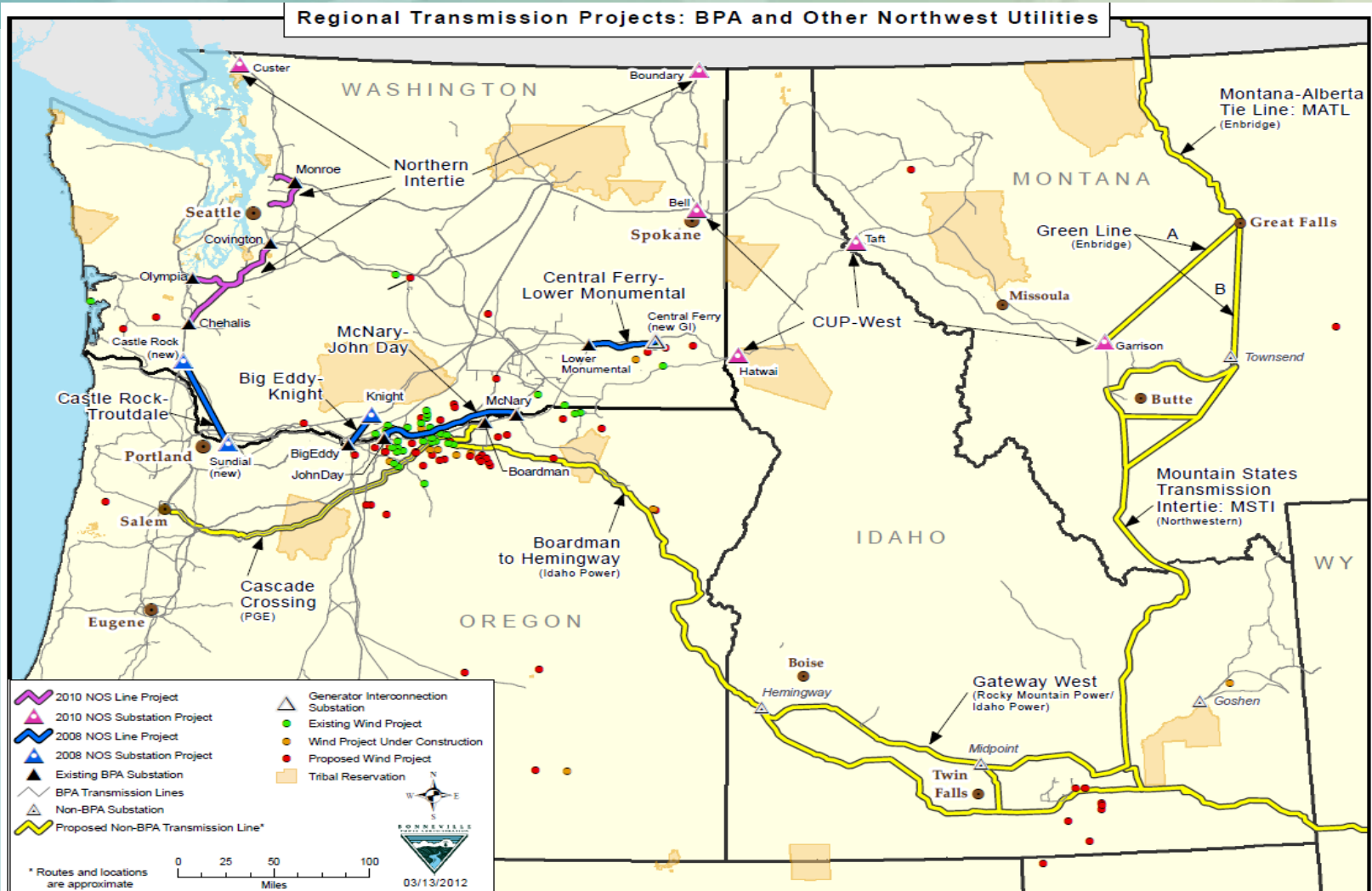
Map of BPA Territory



High-Voltage Transmission System

- BPA owns and operates over 15,000 miles of high-voltage transmission
- BPA's system includes more than 285 substations
- The Federal Columbia River Transmission System spans 300,000 square miles in Oregon, Washington, Idaho, Montana and sections of Wyoming, Nevada, Utah and California
- The transmission system enables a peak loading of about 30,000 megawatts and generates more than \$1.1 billion total revenue (minus expenses net revenues last year totaled \$140 million)
- BPA's Transmission Business Line operates as a non-jurisdictional entity with an Open Access Transmission Tariff based on FERC's pro-forma tariff

Transmissions Lines



Utility Formation Resources

BPA Tribal Affairs website

<http://www.bpa.gov/news/Tribal/Pages/default.aspx>

BPA Standards for Service

<http://www.bpa.gov/news/Tribal/Documents/sfs-policy.pdf>

- (1) be legally formed in accordance with local, state, Federal or tribal laws;
- (2) own a distribution system and be ready, willing and able to take power from BPA within a reasonable period of time;
- (3) have a general utility responsibility within the service area;
- (4) have the financial ability to pay BPA for the Federal power it purchases;
- (5) have adequate utility operations and structure; and
- (6) be able to purchase power in wholesale amounts.

Access to Transmission

What gets connected to a utility's system?

- Generators
- Loads
- Lines

Access to Transmission

What are the issues?

- Safety and Reliability
- Fairness
- Regulatory Obligation

Access to Transmission

How do we address the issues?

Safety and Reliability

Perform a technical study for every interconnection request:

- Is it feasible?
- What are the impacts on the system?
- What facilities need to be constructed to enable the connection?
- What are the costs, and who will pay them?

Access to Transmission

How do we address the issues?

Fairness

Use standard, transparent processes:

- FERC-mandated Tariff
- Open Access
- Non-discriminatory
- 'Queue' for Interconnection Requests

Access to Transmission

How do we address the issues?

Regulatory Obligations

Two primary sources:

- Federal Energy Regulatory Commission (FERC)
- North American Electric Reliability Corporation (NERC)

Access to Transmission

How do we address the issues?

Regulatory Obligations

FERC: Source of rules and regulations for Transmission Owners

- Standardized Processes
- Pro forma Agreements
- Pro forma Tariff

Access to Transmission

How do we address the issues?

Regulatory Obligations

NERC: Source of Reliability Standards

- Mandate to ensure the reliability of the bulk power system
- Rigorous and detailed monitoring and enforcement of standards for every element of transmission system operations and maintenance
- Apply to Transmission System Owners and Operators, Generation Owners and Operators, Balancing Authorities

Access to Transmission

What gets connected to a utility's system?

- **Generators**
- Loads
- Lines

Access to Transmission

Interconnecting:

- **Generators**
- Loads
- Lines

Generation Interconnection Procedures:

- The most detailed process
- Connecting Loads and Lines achieves the same goals through slightly different and less complex procedures

BPA's Large Generator Interconnection Procedures

- For generators over 20 MW nameplate generating capacity
- Smaller generators have similar but less complex set of procedures
- Procedures initiated by FERC in Order 2003
- Adopted by BPA in 2005

BPA's Large Generator Interconnection Procedures

- Obligations fall on both the developer and BPA
- Requirements to execute agreements and submit deposits in a timely manner
- Deposits cover the costs of the technical studies and staff time
- Unspent funds are refundable at the end of the process or if the request is withdrawn
- If the developer fails to meet obligations, request will be withdrawn from the queue

BPA's Large Generator Interconnection Procedures

- Developer submits a Generation Interconnection Request
 - Standard form
 - \$10,000 deposit
 - Evidence of Site Control
- Provides basis for Scoping Meeting with BPA technical team
- Outcome: Decision on which one, two or three potential Points of Interconnection (POI) should be studied

BPA's Large Generator Interconnection Procedures

Feasibility Study:

- Agreement tendered to and executed by developer
- Additional \$10,000 deposit
- Study explores the feasibility of interconnecting at each chosen POI; looks only at the thermal (powerflow) effects
- Provides early rough estimate of likely upgrades needed and of the interconnection facilities (Substation? Transformer?)
- Completed in 45-60 days
- Report is followed by a review meeting

BPA's Large Generator Interconnection Procedures

Interconnection System Impact Study:

Feasibility Study Review meeting selects one POI for study

- Agreement tendered to and executed by developer
- Additional \$50,000 deposit
- Study examines detailed impacts of the interconnection
- Looks at voltage and frequency stability issues, transient events, response to unplanned outages, Remedial Action Schemes in the event of system failures
- Provides more detailed plan of service and estimates
- Completed in ~ 90 days
- Report is followed by a review meeting

BPA's Large Generator Interconnection Procedures

National Environmental Policy Act (NEPA) obligations:

- BPA as a Federal entity is obligated to demonstrate NEPA compliance; cannot tender an Interconnection Agreement until obligations are fully met
- Separate environmental review agreement executed, usually at the same time as the Interconnection System Impact Study (single POI being studied, some definition to the Plan of Service)
- Review includes all the environmental studies required by the developer's Site Certification process with either the County or the State's Energy Facility Siting regulator
- Will not be completed until the site is fully permitted

BPA's Large Generator Interconnection Procedures

National Environmental Policy Act (NEPA) obligations:

- Scope of the review varies according to the scope of BPA's actions and the complexity of the project
- Categorical Exclusion, Tiered Record of Decision, or Environmental Impact Statement. Costs range from \$10,000 to \$? Millions for a complex EIS
- Tiered Record of Decision ~\$50,000
- Record of Decision 'tiered' to BPA's 1995 Business Plan Environmental Impact Statement

BPA's Large Generator Interconnection Procedures

Large Generator Interconnection Agreement:

- Specifies every detail of the commercial and technical aspects of the construction of the interconnection and the generating facility's future operation
- Lays out schedule and funding milestones
- Defines which Network Upgrades financed by the developer will be eligible for Transmission Credits and which facilities will be 'Directly Assigned' to the developer

BPA's Large Generator Interconnection Procedures

Large Generator Interconnection Agreement:

- Does **NOT** make any provision for transmission
- Transmission requirements must be requested and (if necessary) studied separately

BPA's Large Generator Interconnection Procedures

Some useful links:

BPA's [Interconnection portal](#)

<http://www.bpa.gov/transmission/Doing Business/Interconnection/Pages/default.aspx>

A [flowchart](#) illustrating the interconnection process

http://www.bpa.gov/transmission/Doing Business/Interconnection/Documents/lqip_process_timeline.pdf

An overview of BPA's [NEPA processes](#)

http://efw.bpa.gov/environmental_services/NEPAProcessOverview.pdf

BPA's Transmission Services [home page](#)

<http://www.bpa.gov/transmission/Pages/default.aspx>

The Open Access Transmission Tariff [home page](#)

<http://www.bpa.gov/transmission/Doing Business/Tariff/Pages/default.aspx>

CONTACT US!

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